Z-Score Equating Calculator

linear equating · standardised scores · form linking

‹ All statistical tools

Data | Analyses | ▶ Score Equating

Analyses › Equating › **Score Equating** › —

Related tools: Standard scores | Effect size | SEM | Cronbach's α

Upload data | Sample | Paste… | + Row | + Item | − Item | Clear | empty

	Form1	Form2
1		

Score Equating

LINEAR (Z-SCORE) EQUATING ANALYSIS

Press ▶ **Score Equating** to run the analysis. Load a file, paste, or type data first.

METHOD

Linear (z-score) equating places scores from two test forms on a common scale by setting their standardised scores equal. For a Form 1 score X and the equivalent Form 2 score Y, $(X-\mu_1)/\sigma_1 = (Y-\mu_2)/\sigma_2$, which solves to $Y = \mu_2 + (\sigma_2/\sigma_1)(X-\mu_1)$ — a straight line with slope σ_2/σ_1 and intercept $\mu_2-(\sigma_2/\sigma_1)\mu_1$. Each form's mean and standard deviation are estimated from the entered scores; the design may be single-group (the same examinees take both forms) or random-groups (equivalent samples). The method assumes the two distributions share the same shape and differ only in mean and SD; when that fails, equipercentile or IRT equating is more appropriate (Kolen & Brennan, 2014; Angoff, 1984). All computation runs client-side.

REFERENCES

Angoff, W. H. (1984). *Scales, norms, and equivalent scores*. Educational Testing Service. (Reprinted from *Educational measurement*, 2nd ed., 1971)

Kolen, M. J., & Brennan, R. L. (2014). *Test equating, scaling, and linking: Methods and practices* (3rd ed.). Springer. https://doi.org/10.1007/978-1-4939-0317-7

SEE ALSO

Concept: test equating · score linking · z-scores · standard score. Related tools: standard-score converter · effect size.

Cite this tool

Cogn-IQ. (2023). *Z-Score Equating Calculator* [Statistical Software]. Cogn-IQ Statistical Tools Suite.

https://pubscience.org/ps-1mVDO-7e474e-GZ7w

APA 7th

Copy citation

Download .bib